

BILLY GOULD COAL MINE  
& COKE OVENS  
Birmingham Industrial District  
Confluence of the Cahaba River  
& Buck Creek  
Helena  
Shelby County  
Alabama

HAER No. AL-16

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PHOTOGRAPHS

REDUCED COPIES OF MEASURED DRAWINGS

WRITTEN HISTORICAL & DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD  
National Park Service  
Department of the Interior  
P.O. Box 37127  
Washington, D.C. 20013-7127

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**Location:** Within the incorporated limits of the town of Helena, at the confluence of Buck Creek and the Cahaba River, Shelby County, Alabama. The site can be reached by traveling west on Alabama Highway 261 from U.S. Highway 31 to Helena. Ruffin Road, a dirt road, turns to the north and leads to the vicinity of the access routes. A power transmission right-of-way crosses the road, and it is possible to follow this west to Buck Creek, turn right and follow the creek bank to the site. Alternate access can be gained by following Ruffin Road approximately one-quarter mile beyond the power line right-of-way to an old access road on the left. This road is blocked to vehicular traffic, but leads directly to the site. Either route leads to an abandoned railroad bed, a prominent feature, and the site lies to the west of this.

**Present Owner:** The property on which this site is located is included in the Star Cahaba Tract, currently owned by Western Pocohontas Properties, P.O. Box 2827, Huntington, West Virginia 25727, telephone: (304)522-5757

**Present Use:** Abandoned.

**Significance:** As one of the earliest known efforts to exploit the mineral resources of the area, this site represents a crucial stage in the early development of the Birmingham Industrial District. It is also significant for its association with Billy Gould, a pioneering prospector and miner influential in the early development of the coal industry--and by extension the iron industry--of Alabama. The most intriguing feature of this site may be the remains

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of the battery of coke ovens. Based on the years of operation of the site, these ovens represent one of the earliest such structures in Alabama and may to be among the oldest extant. The ovens probably contributed coke for the Oxmoor experiments, proving that Alabama coal could be used to make pig iron.

Project

Information:

This recording project is part of the Historic American Engineering Record (HAER), a long range program to document the engineering, industrial and transportational heritage of the United States. The Birmingham District Recording Project was cosponsored during the summer of 1992 by HAER and the Birmingham Historical Society, Marjorie L. White, Director.

Historian:

J. Lewis Shannon, HAER, Summer 1992

## DESCRIPTION

This site consists of a triangle of land defined to the south by Buck Creek, to the northeast by an abandoned rail bed, and to the northwest by the Cahaba River. The rail bed is easily visible, as the integrity of the grade has survived, and the slag ballast of the railway is still in evidence. At either end of the rail bed section stand ashlar abutments and piers, the remnants of the rail bridges that once crossed the Cahaba River and Buck Creek.

Parallel to the rail bed stand the external retaining walls of a battery of twelve coke ovens. This structure measures 175' in length by 20' in width, and is constructed of dry-laid indigenous stone. The origin of these ovens is uncertain, as they are not mentioned in any known records of the site. Flanking the coke ovens on either side are the beds of rail spurs that extend to the southeast, rising to meet the grade of the main rail bed. Beyond the northwest terminus of the higher spur is a small stone building foundation. To the southwest of the coke ovens lies the elevated bed of a tramway, which terminates at a rock quarry along the banks of Buck Creek. Stone found in this quarry is similar to that used in the construction of the coke ovens. The grade of the tramway bed is consistent with gravity operation.

North of the tramway and west of the coke ovens, between two large tailings or "gob" piles, stands the stone foundation of a steam engine. This structure is also of dry-laid indigenous stone, similar in construction to the coke ovens. Threaded iron or steel rods, or lag bolts, are imbedded in the stonework, protruding from the top in a regular pattern. Adjacent to and near the foundation are various smaller machinery mounting foundations, also of stone with protruding lag bolts. The entire area around the engine foundation and continuing up the slope to the northwest is characterized by extensive rubble, both of stone and of brick.

At the top of the slope to the northwest, and in line with the orientation of the engine foundation, is a cluster of three mine entrances. Two of these are vertical shafts, with one being considerably larger in section than the other. The third opening is a slope, inclined away from the direction of the engine foundation and toward the Cahaba River. Excluding the bridge abutments and the extremities of the rail bed, the entire known complex lies within an area measuring roughly 600' x 1,000'.

## HISTORY

During the American Civil War the Confederate government sought coal to fuel its foundries, arsenals, and other industrial enterprises at Selma and Montgomery, Alabama and Columbus, Georgia. The mines of the Alabama Coal Mining Company and W. P. Browne's mine had been opened in the Cahaba coal field in the 1850s, after

the Alabama and Tennessee Rivers Railroad had established a rail head at Montevallo from the original point in Selma. Thus, a significant level of development had begun in this region prior to the Civil War. To facilitate further access to this resource, the Confederate government financed the construction of a temporary section of the South and North Railroad. This line, construction of which had begun prior to the war, eventually led from the state capital in Montgomery to Decatur, Alabama in the Tennessee River valley. During the war, however, this line was built only from Calera, Alabama, where it joined the Selma, Rome, and Dalton Railroad to Brock's Gap on Shades Mountain, south of present-day Birmingham.<sup>1</sup>

With the link from Calera to Brock's Gap completed, several coal mines began operation in the Cahaba's coal field. One of these sites has come to be known as the Billy Gould mine, in honor of the colorful prospector William L. Gould, who first operated the mine in partnership with Charles and Fred Woodson. Gould was prominent in the early development of the Alabama coal industry. Widely acknowledged to be the first person to make coke from Alabama coal (in Tuscaloosa county in 1854 or 1855), Gould was later credited with discovering Warrior Coal Field's Pratt seam. As the principle source of coke used in the blast furnaces and cupolas of the Birmingham District, Warrior Coal Field's Pratt Seam was vital to the establishment of the Birmingham iron industry.<sup>2</sup>

During the war Woodson and Gould's mine produced seventy-five tons of coal per day, and shipped it directly to Selma. Mine workings included a shaft 131' deep and a slope 300' deep. A steam engine was in use at the mine, and water was hoisted from the mine in a water car. Mining operation included three coal seams: the Wadsworth, the Cahaba, and the Gould. Production was stopped in March of 1865 when Wilson's Raiders demolished all workings and set three thousand tons of stockpiled coal afire.<sup>3</sup>

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<sup>1</sup>Ethel Armes, The Story of Coal and Iron in Alabama (Birmingham: Chamber of Commerce, 1910), 124; Joseph Hodgson, ed., The Alabama Manual and Statistical Register for 1869. (Montgomery: Montgomery Daily Mail, 1869), 127.

<sup>2</sup>Alabama Geological Survey (AGS), Report of Progress for 1875, by Eugene Allen Smith (Montgomery: W.W. Screws, State Printer, 1876), 33-34; Armes, 69, 144; J. Allen Tower, "The Industrial Development of the Birmingham Area," Bulletin of Birmingham Southern College 46 (December 1953): 6.

<sup>3</sup>Armes, 69; Maj. Stephen V. Shipman, diary, 31 March 1865, transcript. Wisconsin State Historical Library in Madison; AGS, Report of Progress, 34.

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Following the war, Woodson and Gould sold their interests in the mines to the Cahaba Coal Company, which extended the slope further down the Cahaba seam. This slope dips to the northwest under the Cahaba River, inclining at roughly forty-five degrees. The mine was flooded by the river during the freshet of 1867, but the Cahaba Company pumped the water out and continued operations. This company also made improvements to the rail line adjacent to the mine in 1868. By 1870, when the Cahaba Coal Company discontinued operations, estimated production of the mine exceeded 40,000 tons of coal.<sup>4</sup>

Although the mine workings were temporarily halted, site improvements continued during this period. Work continued on the South and North Railroad, and a new bridge was constructed across the Cahaba River (completed in 1871) concurrent with excavation for the grade through Brock's Gap. Similarity of construction, as well as historic circumstances, suggest that the Buck Creek bridge was constructed at the same time.<sup>5</sup>

The mine flooded again in the spring of 1872. It remained dormant until the summer of 1874 when it was leased by S.D. Holt, who pumped the water out and resumed production. By 1875 Holt had installed two new lifts and had extended the slope another 160' down the Cahaba slope. At that time mine production was approximately sixty tons of coal per day.<sup>6</sup>

No records of mine operations beyond 1875 have been located. By 1890, Geological Survey maps indicate no active mine at the site. The South and North line, absorbed by the Louisville and Nashville (L&N) Railroad, was rerouted between 1905 and 1910, bypassing the site altogether.<sup>7</sup>

The Billy Gould mine is one of the best preserved examples of

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<sup>4</sup>AGS, Report of Progress, 34-35; AGS, "Map of the Cahaba Coal Field and Adjacent Regions:", 1890; Eugene Allen Smith, "Field Notes of Eugene Allen Smith," vol. 1, 306-307, Alabama Geological Survey, University of Alabama, Tuscaloosa.

<sup>5</sup>Montgomery Daily Advertiser, 3 June 1871, transcribed by Robert Barnwell Henckell, "The New Cahaba Bridge", entry 6, Information About Birmingham, Jefferson County and Alabama, vol. 1, n.d., Tutwiler Collection of Southern History and Literature, Birmingham Public Library.

<sup>6</sup>AGS, Report of Progress, 35.

<sup>7</sup>AGS, "Map of Cahaba Coal Field"; United States Geological Survey Map, 15 degree series, "Helena Quadrant", 1907; United States Geological Survey, "Bulletin 400", 1910, plate 1.

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industrial activity during a crucial stage in the early development of the Birmingham Industrial District. The efforts to exploit the mineral resources of the Cahaba Coal Field by pioneering coal miners such as Billy Gould, not only provided a source of raw material for the Confederacy during the Civil War, but also laid the ground work for the development of the district in the decades that ensued. The success of their hasty wartime efforts focused attention on the industrial potential of the mineral belt of Alabama, facilitating investment of capital by southern, northern and foreign sources. This site was also associated with a historical figure, since Billy Gould was strongly associated with the early development of the coal industry, and with the extension of the iron industry, throughout the mineral belt of the state.

Perhaps the most important feature of this site is the battery of coke ovens. Based on the years of operation of the site, these ovens represent some of the earlier such structures in the state, and may prove to be the oldest coke ovens still standing in Alabama. The ovens were built before 1890, and may date to before the Civil War. Although unsubstantiated by written records, these coke ovens were probably constructed as part of the 1870s Oxmoor experiments. These experiments were conducted in an effort to convert local Cahaba coal into coke suitable for fueling blast furnaces, and therefore constitute a critical juncture in the history of the Birmingham District. Had these attempts failed, iron production in the area would have been unable to compete with the industrial North in the market place.

Thus, it was during this period that the construction of large scale coke ovens began with experiments to make coke pig iron at the Oxmoor Furnaces. It is highly probable that the twelve beehive ovens built at the Billy Gould Mines were the experimental precursors to the large battery of 100 ovens built by the company at their Helena Mines, no longer extant. If so, the coke ovens at the Billy Gould site would be virtually the only extant site associated with these experiments, a critical event in the development of the coke industry in this region. Regardless, they are probably the only surviving coke ovens erected in this part of the Cahaba coal field following the Civil War.

#### FURTHER RESEARCH

There are two avenues of further study for this site. It is candidate for archeological investigation, based on the extensive remains of evidence; the remoteness of the site has afforded some degree of protection from vandals and souvenir hunters. It is likely that the coke ovens could be given an approximate date based on the technology employed. For instance, rubble patterns suggest that they may not have been beehive type ovens, but rather rectangular or barrel-vaulted ovens. An archeological study could also indicate to what extent the ovens were used, as well as yield

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valuable information about the other foundations located on the site.

There is also potential for further significant archival research. The current owners of the site purchased the property from the CSX Rail System, which absorbed the L&N Railroad. This suggests that the property was never owned by those companies and individuals involved in mining operations, but was actually within the railroad right-of-way, and was only leased for mining purposes. The bulk of the remaining material from the L&N, including records of the South and North line, is held in the archives of the University of Louisville.



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ADDENDUM TO  
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ADDENDUM TO  
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HISTORIC AMERICAN ENGINEERING RECORD

BILLY GOULD COAL MINE & COKE OVENS

This report is an addendum to a 8 page report transmitted to the Library of Congress in 1995.

Location: At the confluence of Buck Creek and the Cahaba River, Helena, Shelby County, Alabama. Access to site from dirt logging road to Hubbard's Ford, one mile north of Helena. The site contains c. 40 acres.

Ownership: CSX Railroad

Date of  
Construction: 1870s

Dimensions: Opening 15' X 15'

Project  
Information: This report is based upon written documentation donated by the Birmingham Historical Society, reformatted to HABS/HAER guidelines.

Significance: It is difficult to accurately determine the significance of this site until further research has established the construction dates of the bridgework and coke ovens. The mine openings are significant because they are among the earliest mine remnants from the post Civil War era.

The coke ovens, possibly the most significant feature of the site, might have been built as an experiment to determine the cokability of Cahaba coal field coal during the Oxmoor experiments of the 1870s. Whatever the date of their construction, they are probably the only surviving example of the few coke ovens constructed in this portion of the Cahaba coal field following the Civil War.

The bridge piers and abutments probably built during the 1880s or 1890s, constitute some of the few surviving remnants of the L. & N. Railroad built over the original course of the South and North Alabama Railroad pushed through the District during the Civil War.

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**Description:** The site is located on an elevated bluff at the confluence of Buck Creek and the Cahaba River. The site has slopes ranging from medium to steep and is heavily eroded. This is a complex site that contains several components of undetermined temporal affiliation, including the remains of ashlar pier and abutment work of former railroad bridges over Buck Creek and the Cahaba River; two coal mine openings (slope and shaft) with hoisting engine foundation and tailings pile; the ruins of a battery of 12 beehive coke ovens; a stone quarry where the stone work for the coke ovens and portions of the bridges may have been quarried; and remnants of railroad and tramway beds.

### HISTORICAL OVERVIEW

The earliest Billy Gould Mine at this site was opened in 1863 by William L. (Billy) Gould and Charles and Fred Woodson to supply coal for the Confederate Arsenal and Naval Foundry at Selma. Opened after a temporary track of the South and North Alabama Railroad was extended from Calera to Helena, the mine produced 75 tons of coal per day. Mules and wagons hauled coal from this horse-powered slope to the nearby railway. In 1866, Gould and the Woodsons sold the mine to the Cahaba Coal Company, which established a monopoly on the coal trade in the area through the acquisition of Browne Mine and Irish Pit near Montevallo. Between 1866 and 1870, this mine produced over 40,000 tons, making it one of the largest Reconstruction era mines.

William L. ("Uncle Billy") Gould (b. 1830 near Glasgow, Scotland into a coal-mining family) answered an ad to mine coal in Tuscaloosa. This ad appeared in an 1854 Philadelphia Sun. Gould came to Tuscaloosa then drifted from county to county, opening mines and shipping boat loads of coal to Wetumpka, Montgomery, and Mobile. During the Civil War Gould shipped approximately 75 tons of coal per day to the Selma arsenal. Captain John M. Huey of Jonesboro served as the Confederate Navy's Selma agent and handled the sale of coal and lumber to the government. In 1865, Wilson's Raiders destroyed the mines, burning 3,000 tons of coal in area stockpiles.

"Uncle Billy" then tried his hand at the cotton business in Selma. Later he continued prospecting coal seams. In 1870, he located the coal seam at Newcastle in Jefferson County. In 1877, he discovered the famous 4' 8" seam that became known as the Pratt seam, the seam which opened large scale development of the Birmingham District. Gould sold out "for a song" to the Sloss/DeBardeleben/Aldrich team. Other miners reopened Gould

mines after the Civil War, perhaps to fuel the close-by Eureka Coke Ovens at Oxmoor, and the 12 coke ovens at the site may have been built for this purpose.

Since 1905, when the L. & N. Railroad, successor to the South and North, abandoned this segment of trackage, the site appears to be known only to local historical buffs. A black cemetery nearby appears to have been associated with railroad crews who maintained the track previous to 1905.

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